U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION II
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MEMORANDUM

TO: Steve Cipot - Project Manager
ERRD/NJRB

FROM: Andy Crossland - Geologist
ERRD/PSB/TST

DATE: Monday, September 25, 2000

SUBJECT: Additional comments on the *Work Plan to Evaluate Additional Technologies to Enhance On-Site Free Product Recovery*, L.E. Carpenter, Wharton, New Jersey.

In response to your request, I have attempted to give some specific guidance on the types of information which the work plan is lacking. These comments pertain to the pilot test portion of the document which is included as pages 9-11. If you have any questions concerning these comments, please feel free to call me at x4436.

1. For all drilling activities, include a) the total depth of the drill hole, b) details of drilling methods (hollow stem augers?) c) how the boreholes will be logged (continuous split spoons?) d) details on well construction including materials to be used, annulus materials and intervals etc.. (Some of this information is given for the MPE well, but it is not complete and no such information is given for other wells or monitoring points.)

2. The text stated that existing monitoring wells "would be utilized" and other more distal wells "may be monitored." Details on exactly which wells will be monitored should be included along with the parameters to be measured at each point, what equipment will be used to monitor, and a plan of how frequently they will be monitored. Note that with regards to frequency of monitoring the texts states only that it will occur "before, during, and after the test at regular intervals." Greater detail on these types of items need to be included for each of the phases of the pilot testing.

3. Include a discussion and details of how extracted materials will be treated, stored and or disposed of, as well as any relevant figures showing the process. At present the document states only that product would be temporarily stored (how, where and for how long?) and that groundwater would "likely be treated...with appropriate technology." (Page 6) A plan for monitoring and treating the vapor phase also needs to be included.

4. Steam injection has the potential to mobilize volatiles into soil vapor and to the surface. Soil vapor monitoring for VOCs should be included in this portion of the pilot testing as well as during the chemical oxidation phase.

5. It is recognized that the chemical oxidation pilot test portion of the document is intended only as a "conceptual design." Presumably, a separate work plan will be prepared for this work, if necessary based on the results of the bench scale effort. Injection well construction may be discussed at that time, but the use of black iron would need to be justified as it seems likely that the oxidants would severely corrode an iron well.

6.